REMARKS

Applicants have carefully reviewed the Office Action mailed July 20, 2005, and thank Examiner Bonck for his detailed review of the pending claims. In response to the Office Action, Applicants have amended claims 1, 15, 22, and 34, canceled claim 8, and added new claims 49-53. A typographical error was corrected in claim 34. By way of this amendment, no new matter has been added. Accordingly, claims 1-7 and 9-53 remain pending in this application. Applicants respectfully request reconsideration of the present application in view of the above amendment and the following remarks.

New Claims

New claim 49 positively recites "the cover module includes only one return spring." Support for this limitation can be found, for example, in Paragraph [0046], sentences 1 and 2, Paragraph [0045], paragraph [0048], sentence 3, and the embodiments illustrated in FIGS. 4-6 and 12.

New claim 51 positively recites "the return spring is generally coaxial to at least one of the input portion and the output portion." Support for this limitation can be found, for example, in the embodiments illustrated in FIGS. 4-6 and 12.

New claims 50 and 52 positively recite "the return spring reacts directly on a surface of the fixed plate." Support for this limitation can be found, for example, in Paragraph [0046], sentence 1, Paragraph [0045], sentence 2, and the embodiments illustrated in FIGS. 4-6 and 12.

New claim 53 positively recites "the return spring selectively operates to generally eliminate the clamping force on the friction plate." Support for this limitation can be found, for example, in Paragraph [0046], sentences 1 and 2, Paragraph [0045], and the embodiment illustrated in FIG. 4.

Claim Rejections – 35 U.S.C. § 112

Claims 6, 15, and 36 were rejected under 35 U.S.C. § 112 as being indefinite. Applicants respectfully traverse the rejection.

Specifically, the Examiner has rejected claim 15 since a reading thereof may indicate two different sets of weights. Accordingly, Claim 15 has been amended to clearly articulate the intended scope of the claim.

When describing an invention to one of skill in the art, the presentation of "terms need only be reasonable with respect to the art involved; they need not inform the layman nor disclose what the skilled already possess. They need not describe the conventional. The intricacies need not be detailed ad absurdum." *General Electric Company v. Brenner, Comr. Pats.*, 159 USPQ 335, 337 (CADC 1968). Furthermore, "[r]equiring inclusion in the patent of known scientific/technological information would add an imprecise and open-ended criterion to the content of patent specification, could greatly enlarge the content of patent specifications and unnecessarily increase the cost of preparing and prosecuting patent applications, and could tend to obfuscate rather than highlight the contribution to which the patent is directed. A patent is not a scientific treatise, but a document that presumes a readership skilled in the field of the invention." *Ajinomoto Co. v. Archer-Daniels-Midland Co.*, 56 USPQ2d, 1332, 1338 (Fed. Cir. 2000).

The Examiner has also rejected claims 6 and 36 due the use of the terms 'height' and 'height to thickness ratio.' Applicants respectfully submit that the term 'height to thickness ratio,' as it pertains to disc-like springs, was well known in the art at the time of filing the present application. Attached is an information sheet from West Coast Lockwashers, Inc., found at http://www.wclco.com/pdf/spring/sw095-096.pdf. As illustrated in the attachment, the height to thickness ratio of a disc-like spring is well known in the art, and therefore meets the standard of *Ajinomoto*. See also SAE HS 1582 'Manual on Design and Manufacture of Coned Disk Springs (Belleville Springs) and Spring Washers,' (June 1988), and US Patent No. 4,641,736, column 5, lines 3-7. Accordingly, reconsideration and withdrawal of these rejections is respectfully requested.

Claim Rejections – 35 U.S.C. § 102

I. GOCHENOUR

Claims 1-3, 5, 7-11, 14, 21-24, 26, 33-35, 37, 40 and 48 were rejected under 35 U.S.C. § 102(b) as being anticipated by *Gochenour et al.* (U.S. 2003/0042108 A1). Applicants respectfully traverse the rejection.

To anticipate a claim, the reference must teach every element of the claim. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the ... claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Independent claim 1 positively recites a "return spring configured to apply a return force on the weights through the moveable plate." In contrast, Gochenour teaches a return spring 114 which is not 'configured to apply a return force on the weights through the moveable plate.'

Additionally, Applicants note that the Examiner has identified preloaded spring member 132 in Gochenour as a 'return spring'. However, the Examiner cited paragraph [0041], 3rd sentence, indicating that preloaded spring member 132 is provided to limit an axial force, and has not explained how preloaded spring member 132 can 'apply a return force on the weights.' Thus, Gochenour does not teach every limitation of independent claim 1, as required in *Verdegaal Bros.*

Independent claim 22 positively recites that "the cover module includes only one return spring." In contrast, Gochenour teaches the need for multiple return springs. Thus, Gochenour does not teach every limitation of independent claim 22.

Independent claim 34 positively recites a "reaction member engaged for axial movement with the first weight engaging plate and at least one return spring member positioned between the reaction member and the second weight engaging plate, the return spring member configured to apply a return force against the first weight engaging plate through the reaction

member to bias each of the roller weights toward a pre-moved position against the effects of centrifugal force." In contrast, Gochenour does not teach or suggest this limitation. Thus, Gochenour does not teach every limitation of independent claim 34.

Dependent claims, 1-3, 5, 7-11, 14, 21, 23-24, 26, 33, 35, 37, 40 and 48, which depend from independent claims 1, 22 and 34, are also patentable by being dependent on an allowable base claim. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

II. ATSUMI

Claims 2-4, 9, 10, 34, and 35 were rejected under 35 U.S.C. 102(b) as being anticipated by *Atsumi et al.* ('172). Applicants respectfully traverse the rejection.

Independent claim 1, as amended, positively recites that "the return spring is selectively biased in a generally disc-shaped configuration." In contrast, Atsumi teaches only cylindrical coil springs. Thus, Atsumi does not teach every limitation of independent claim 1, as required in *Verdegaal Bros.*

Independent claim 34 positively recites that "reaction member engaged for axial movement with the first weight engaging plate and at least one return spring member positioned between the reaction member and the second weight engaging plate, the return spring member configured to apply a return force against the first weight engaging plate through the reaction member to bias each of the roller weights toward a pre-moved position against the effects of centrifugal force." In contrast, Atsumi does not teach or suggest a reaction member. Thus, Atsumi does not teach every limitation of independent claim 34.

Dependent claims, 2-4, 9, 10, and 35, which depend from independent claims 1 and 34, are also patentable by being dependent on an allowable base claim. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

III NAKANE

Claims 1, 2, 10, 20, 34, 35, 45, and 46 were rejected under 35 U.S.C. § 102(b) as being anticipated by *Nakane* ('862). Applicants respectfully traverse the rejection.

Independent claim 1, as amended, positively recites that "the return spring is selectively biased in a generally disc-shaped configuration." In contrast, Nakane teaches a cylindrical coil spring 23 (See FIG. 5). Thus, Nakane does not teach every limitation of independent claim 1, as required in *Verdegaal Bros.*

Independent claim 34 positively recites that "reaction member engaged for axial movement with the first weight engaging plate and at least one return spring member positioned between the reaction member and the second weight engaging plate, the return spring member configured to apply a return force against the first weight engaging plate through the reaction member to bias each of the roller weights toward a pre-moved position against the effects of centrifugal force." In contrast, Nakane does not teach or suggest this limitation. Thus, Nakane does not teach every limitation of independent claim 34.

Dependent claims, 2, 10, 20, 35, 45, and 46 are also patentable by being dependent on an allowable base claim. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

IV MILLER

Claims 1-4, 7-12, 14-17, 22, 24, 26-28, 33-35, 37, 38 and 40-42, which depend from independent claims 1 and 34, were rejected under 35 U.S.C. 102(b) as being anticipated by *Miller* ('639). Applicants respectfully traverse the rejection.

Independent claim 1, as amended, positively recites that "the return spring is selectively biased in a generally disc-shaped configuration." In contrast, Miller teaches a cylindrical coil spring (see FIGS. 1 and 3). Thus, Miller does not teach every limitation of independent claim 1, as required in *Verdegaal Bros.*

Independent claim 22, as amended, positively recites that "the cover module includes only one return spring." In contrast, Miller teaches the need for multiple return springs. Thus, Miller does not teach every limitation of independent claim 22.

Independent claim 34 positively recites that "reaction member engaged for axial movement with the first weight engaging plate and at least one return spring member positioned

between the reaction member and the second weight engaging plate, the return spring member configured to apply a return force against the first weight engaging plate through the reaction member to bias each of the roller weights toward a pre-moved position against the effects of centrifugal force." In contrast, Miller does not teach or suggest a reaction member. Thus, Miller does not teach every limitation of independent claim 34.

Dependent claims, 2-4, 7-12, 14-17, 24, 26-28, 33, 35, 37, 38 and 40-42, which depend from independent claims 1, 22 and 34, are also patentable by being dependent on an allowable base claim. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Claim Rejections – 35 U.S.C. § 103

Claims 13, 18-20, 25, 29, 30-32, 39, and 43-47 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Miller* ('639). Applicants respectfully traverse the rejection.

When rejecting a claim based upon a sole 35 U.S.C. 103(a) reference, the Federal has Circuit has provided some guidance. Specifically, *In re Gordon* provides that "[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." 221 USPQ 1125, 1127 (CAFC 1984). In addition, the Federal Circuit has held that "[i]t is not pertinent whether the prior art device possesses the functional characteristics of the claimed invention if the reference does not describe or suggest its structure." *In re Mills,* 16 USPQ2d 1430, 1433 (1990).

As mentioned above, Miller does not teach the limitations of independent claims 1, 22, or 34. Accordingly, Miller cannot teach the limitations of claims 13, 18-20, 25, 29, 30-32, 39, and 43-47, which depend therefrom.

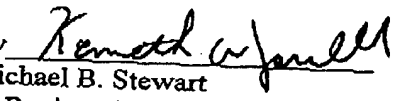
Conclusion

In view of the above amendment and remarks, the pending application is in condition for allowance. If, however, there are any outstanding issues that can be resolved by telephone conference, the Examiner is earnestly encouraged to telephone the undersigned representative.

It is believed no fees are due with this response. However, if any fees are required in connection with the filing of this paper that are not identified in any accompanying transmittal, permission is given to charge our Deposit Account No. 18-0013, under Order No. 65856-0056 from which the undersigned is authorized to draw. To the extent necessary, a petition for extension of time under 37 C.F.R. §1.136 is hereby made, the fee for which should also be charged to this Deposit Account.

Dated: October 10, 2005

Respectfully submitted,

By 

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Attachment: Information sheet on Disc Springs

R0315737.DOC

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BELLEVILLE DISC SPRINGS

Disc Springs, with all of their variations, are among the most widely used tension generating washers. They are used for spanning alignment holes, distributing bearing loads and for generating and sustaining the tension needed to hold assemblies together.

Belleville washers provide a very high spring force for short movement and have a high energy storage capacity. In a true Belleville washer, the ratio of material thickness to rim width is held to about one in five. Crown height actually should not exceed 40% of material thickness. In application, yield strength is not exceeded and the washer returns to its full crown height when compression force is removed.

Commercial Disc Springs are not held to the specific O.D./crown height/thickness ratios required of the true Belleville Disc Spring washers. Traditionally, the crown height to thickness ratio is considerably greater for commercial Disc Springs. When loaded to flat, their yield point may be exceeded. These washers, however, are often used in applications where they function entirely within their elastic range. In applications where they are loaded beyond their yield point they will act in a consistent manner over a reduced crown height. Such washers have, in effect, become reformed.

By varying thickness and crown height relationships, design engineers meet a wide range of load/deflection requirement with Disc Spring washers. A crown height to thickness ratio ranging from 0.4 to 0.8, for example, produces a fairly constant spring rate (Figure 1).

With a crown height to thickness ratio up to 1.4, the washer will show a positive rate of increase in the load up to 100% deflection (Figure 2).

At a crown height to thickness ratio of 1.4, the Disc Spring shows a constant load over a fairly large deflection, making it useful in applications where extreme wear conditions must be absorbed (Figure 3).

Where the ratio of crown height to thickness exceeds 1.4, yielding will occur and, possibly, oil canning or inverting (Figure 4).

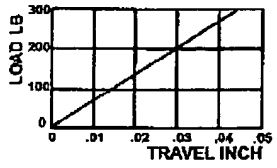

Figure 1

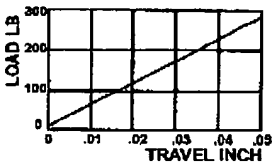

Figure 2

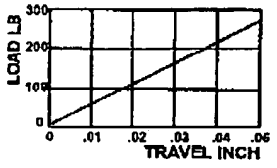

Figure 3

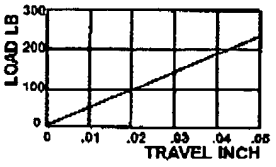

Figure 4

SLOTTED DISC SPRINGS

Often referred to as a diaphragm spring, the Slotted Disc Spring is used in clutch applications and other applications requiring high travel consistent within acceptable stress limits. The characteristics curve, as shown in figure 6, indicates a relatively constant load over a wide range of deflection.

An overall comparison of washer deflection characteristics resulting from load applied to washers with specific height to thickness ratios is shown in Figure 5.

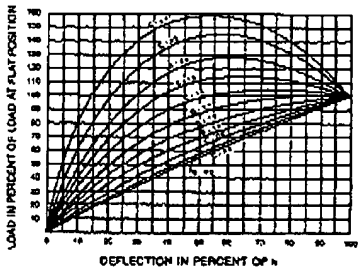

Figure 5

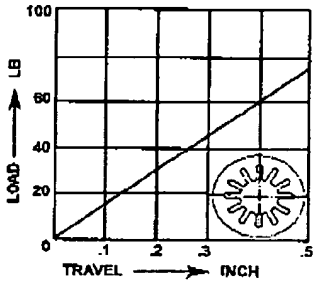

Figure 6

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STACKING

Disc Springs are often stacked to enhance performance characteristics. By stacking them in parallel, load bearing characteristics are enhanced (Figure 7). when stacked in series, greater deflection or travel is achieved (Figure 8).

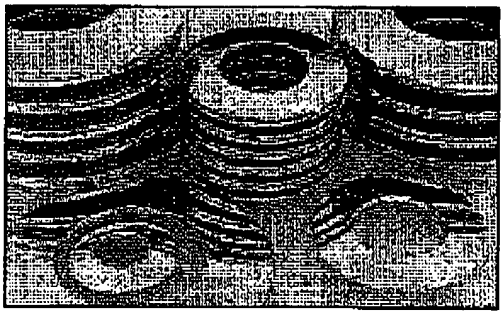

Figure 7

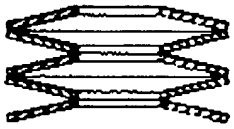

Figure 8

Combination stacking, in parallel and in series, increases both load bearing and deflection (Figure 9). Disc Springs of varying thicknesses can also be stacked to achieve specific performance objectives (Figure 10).

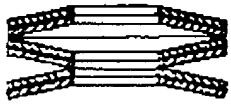

Figure 9

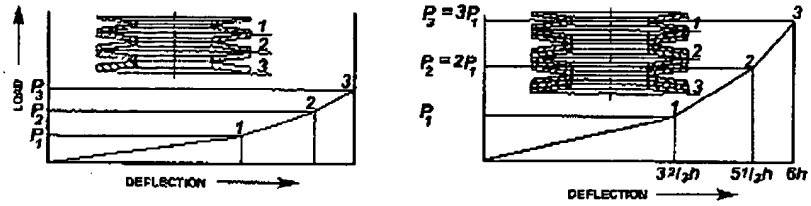

Figure 10

COMPARING DISC SPRING STACK TO COIL SPRING

Figure 11 clearly shows how Disc Springs, stacked in series, support the same load as a coiled spring with a substantial reduction in space required. Disc stacks may be designed for extremely high loads where coil springs are not feasible at all.

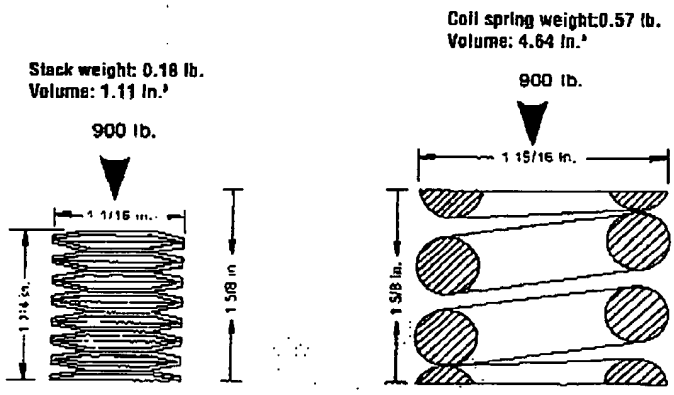

Figure 11

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